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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/621,460	07/21/2000	Hirofumi Kamosawa	048369/0118	4653

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Foley & Lardner  
Washington Harbour  
3000 K Street NW Suite 500  
P O Box 25696  
Washington, DC 20007-8696

EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/621,460

Applicant(s)

KAMOSAWA ET AL.

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,4.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 7-11 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected group II, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

### ***Drawings***

1. Figures 6 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: some minor grammatical errors such as: page 3, line 27 replace 'it is possible inject liquid .....' with 'it is possible to inject liquid.....'. Applicant is hereby requested to check for any other errors, which the Examiner may have missed.

Appropriate correction is required.

***Claim Objections***

3. Claim 6 is objected to because of the following informalities: delete one 'of'. Also, the word 'either' should be followed by 'or', such either one of said array substrate or said opposing substrate. If the limitation uses and, then the limitation should read 'both the said array substrate and said opposing substrate' is more appropriate. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 5 recite the limitation "said an overall liquid-crystal injection areas" in claims 1 and 5. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 1 recites the limitation "said aperture holes" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 2 recites the limitation "said apertures" in claim 1. There is insufficient antecedent basis for this limitation in the claim. There is a reference to 'aperture' but not to 'aperture(s)'.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2, 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazlas et al (kazlas) (U.S.Patent No. 5,919,606) in view of Hirakata et al. (Hirakata) (U.S.Patent No. 6,219,127).

a. As to claims 1 and 5: Kazlas discloses a liquid-crystal display element (Fig. 9) wherein an array substrate on which a plurality of liquid-crystal injection areas (940) are arranged and each liquid crystal injection area is surrounded by a seal (950) having an aperture and an overall liquid-crystal injection areas being surrounded by an outer peripheral seal (920) having an aperture (930), and an opposing substrate are adhered together, and the aperture of the outer peripheral seal being sealed by a hole sealant (photo defined adhesive sealer), after which cutting plurality of liquid-crystal injection areas along lines 930A and 930B, scribe lines) as formed between the opposite aperture holes so as to separate individual liquid-crystal injection areas. Although, polishing of the substrates is well known and quite necessary for proper operation of the liquid crystal display, Kazlas does not explicitly disclose this operation. Hirakata on the other hand, in disclosing a similar liquid crystal display device, discloses (Col. 3, lines 60-64) polishing the end surfaces of the substrates (101 and 102). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the end polishing operation as

disclosed by Hirakata to the display configuration of Kazlas to protect against contamination and simplify handling.

As to claim 2: Kazlas discloses that a plurality of apertures at the outer peripheral seal are provided (Fig. 9) along the outer peripheral seal (620) and at crossing points each being formed between the outer peripheral seal and a line along (scribe lines) which the individual liquid-crystal injection areas are cut apart.

As to claim 4: Kazlas discloses that the outer peripheral seal and the edge sealer comprise a polymeric resin and UV curing (Col. 1, lines 60-64).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazlas in view of Wenz et al. (Wenz) (U.S. Patent No. 5,268,782). Kazlas discloses separating an individual liquid-crystal injection area, liquid crystal is injected into the liquid-crystal injection area (col. 11, lines 17-44) and sealing of the individual cells. Although incorporation of polarizers in liquid crystal display is also well known, Kazlas does not explicitly disclose the application of polarizers. Wenz on the other hand, in disclosing a similar multi cell liquid crystal display device, discloses polarizers (24, 26). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the polarizers disclosed by Wenz to the display configuration of Kazlas to achieve high contrast and high brightness displays.

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11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazlas in view of Ishihara et al. (Ishihara) (U.S. Patent No. 5,537,235). Kazlas does not disclose a tapered configuration. Ishihara on the other hand, discloses the end portions of substrate (31b) and the opposing substrate (31a) showing a tapered configuration (Figs. 4A and 4B, Col. 9, lines 20-22). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the tapered configuration as disclosed by Ishihara to the display configuration of Kazlas to achieve uniform display.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on 703-308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

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*PRA*

October 16, 2002

*William L. Sikes*

William L. Sikes  
Supervisory Patent Examiner  
Technology Center 2800